Department of Toxic Substances Control

Matthew Rodriquez
Secretary for
Environmental Protection

Barbara A. Lee, Director
700 Heinz Avenue
Berkeley, California 94710-2721

Edmund G. Brown Jr.
Governor

October 20, 2017

Mr. Derek Robinson
BRAC Environmental Coordinator
Navy BRAC PMO West
33000 Nixie Way; Bldg 50
San Diego CA 92147

Dear Mr. Robinson:

The Department of Toxic Substances Control (DTSC) has received the draft Radiological Data Evaluation Findings Report (Report) for Parcels B and G Soil dated September 2017 and received on September 29, 2017. DTSC has reviewed the Report and has the following comments as presented below. Our comments pertain to the Parcel G Navy recommendations and general information provided in the Report. Our comments are based on our review of the fill units, as well as the California Department of Public Health, Environmental Monitoring Branch (CDPH EMB) and United States Environmental Protection Agency (EPA) findings on the evaluation forms for the building soil units, and EPA's findings on the evaluation forms for the trench units.

We will submit comments on Parcel B following review of the evaluation forms that were provided in the Report, tentatively by no later than November 3, 2017.

General Comments

1. DTSC does not agree with the recommendations indicated in the Executive Summary and Section 4.3 regarding the number of trench units, fill units, and current and former building sites in Parcel G that require no further action (NFA). Please refer to the EPA comments on this Report in regard to the Parcel G trench and building units, which DTSC concurs with (submitted October 20, 2017 via email).
2. DTSC has reviewed the findings of CDPH EMB and the EPA's analysis of the building units. DTSC concurs with these recommendations as indicated in the EPA comments on this Report (submitted October 20, 2017 via email).
3. DTSC has reviewed the findings of the EPA's analysis of the trench units. It appears that all of the destination trench units where the excavated soil was used, are now recommended for resampling by either the Navy or EPA. DTSC

concurs with these recommendations. Therefore, we request 100% of the fill units to be resampled.

4. DTSC understands that more than one fill unit was required to fill a trench unit, and mixing most likely occurred. It is impossible to identify where in the trench unit the soil was placed. Therefore, sampling throughout the trench unit will be required.
5. It should be stated in the text of this report the possible next steps. For example:
    a. The reanalysis of archived soil samples may result in the need to collect confirmation samples.
    b. The collection of confirmation soil samples may lead to the need for collection of addition sample data and/or remediation.
6. The Report does not indicate how each of the allegations presented are addressed by the evaluations presented. It should be clearly demonstrated how each allegation of falsification is being addressed and how possible falsification can be identified with the various evaluations processes that were performed. The Report should also indicate if no evaluation tool has been identified to address an allegation.
7. The range of naturally occurring Ra-226 has not been demonstrated. It is inappropriate to indicate that radionuclide concentrations are within a naturally occurring range that has not yet been established. In order to determine the range of naturally occurring Ra-226 at the Hunters Point site, the Navy will need to submit a draft work plan with the process for making such a determination to the regulatory agencies for review and acceptance. See also Specific Comment 16.
8. Please revise and/or replace the Box Plots and Quantile Plots provided in the report with ones that are more readable, e.g. same scale and within the same plot for better interpretation. See the attached examples provided by Langan environmental consulting.

Specific Comments

1. Executive Summary, bullet #7 – The statement from the previous bullet should be added to this one as well, "thereby reducing the probability of radiation detection".
2. Executive Summary, 2nd set of bullets, bullet #2 – Please justify within the text of the Report why the archived soil samples (initial systematic samples) may be considered valid given Tetra Tech EC, Inc.'s (TtEC) attempt to falsify other samples.
3. Executive Summary, 2nd set of bullets – What is the decision criteria for the various recommendations; reanalysis of archived samples, collect new confirmation samples, inspection of archived samples? The first, reanalysis of archived samples, will only be acceptable if there is confidence in the validity of the sample. The later will be subjective and provide no quantitative results that can be used as a decision maker and, therefore, should be deleted.

4. Executive Summary, 2nd set of bullets, Confirmation Sampling – Indicates collection of additional data may include surveys and scans. Please define and/or explain the difference between the two. These terms are used throughout the report in various forms. Please also define/describe the term static. Section 2.1 refers to radiological surveys as gamma surface scans, gamma radiation scan surveys, and refers to both static and scan measurements.
5. Executive Summary, Footnote #3 and Section 4, Footnote #1– This is an important footnote. Suggest it is included in the main text of the Report rather than as a footnote.
6. Executive Summary, Assumptions and Uncertainties, Bullet #3 – Please revise as follows: *Data quality related to TtEC's laboratory analytical methods and procedures has been assessed and approved by the Navy and regulatory agencies in previous reports submitted by TtEC.*
7. Section 1.3, last bullet – See Specific Comment #6.
8. Section 2.1 – Were static scan surveys performed on piping only? Please clarify.
9. Section 2.3 - Indicates Ra-226 release criteria is 1 pCi/g above background activity. This should be included in Table 2-1 table as a footnote.
10. Section 2.5 – An additional allegation that should be considered and listed: *When soil was to be used as backfill, rather than disposed of off-site, screening procedures may have been more lax.* This is per the EPA list of allegations.
11. Section 3, 1st paragraph – Clarification is needed between #1 and #2; they appear very similar.
12. Section 3, 1st paragraph, #3 - This should be included in the executive summary as well.
13. Section 3 – An additional bullet should be added to describe how suspect data were evaluated. Suggestion: Additional Evaluation. This category would cover such things as review of SUPRs for gamma scan range for criteria exceedances, which was identified numerous times. And also, gamma scan performed after the final systematic samples were collected.
14. Section 3, 1st bullet – It is not clear that laboratory results were used to fill in data gaps found in TtEC's database. If this is correct, please revise this section so that it is clear to the reader that laboratory results were used in place of missing or incorrect data found in TtEC's database.
15. Section 3, 4th bullet, Logic Tests – The approach includes assumptions regarding final systematic soil samples. Assumptions should also be included about initial systematic samples to explain why/if there is confidence in the data.
16. Section 4, last paragraph – Indicates "the upper range of naturally occurring Ra-226 exceeds the release criteria. Therefore, cleanup will be hampered without an understanding that naturally occurring Ra-226 may exceed the release criterion without being indicative of contamination." DTSC agrees with the later part of this statement, however, the Navy has not presented an evaluation of the range of naturally occurring Ra-226. Therefore, this statement must be deleted. See General Comment #1 above.

17. Section 4.1.1.1 – Indicates that one sample will be reweighed and reanalyzed. In the interest of time, please include the next step as well.
    a. What will the reweigh and reanalyze tell you, and how will that information be used?
    b. Will the next step be to reanalyze all initial systematic samples or collect new confirmation samples?
18. Section 4.1.2.1 – It appears that OB 72 should be OB 196.
19. Section 4.1.2.2, OB 72 – Recommends confirmation sampling. Please clarify in the text that sampling of a fill unit (both ES and OB) will be conducted in the TU where it was used to fill.
20. Section 4.1.3.1, SU G, last sentence – Indicates sample results from Building 103 SUs A through F are suspect. This should indicate A through G.
21. Section 4.2.1.1, TU 77 – Please clarify the term "survey activity" in the text. This term is repeated often but it is unclear what that entails.
22. Section 4.2.1.1, TU 77, 81, 90, 95, 105, 109, 110, 112, 113, 114, 120, 122, 123, 129, 153 – Add new bullet. See Specific Comment #13.
23. Section 4.2.1.1 TU 94 – Add new bullet. See comment #13 above.
24. Section 4.2.2.1, ES 12, 1st sentence – States, "Soil used to create **ES 6** originated….." It appears this should state ES 12.
25. Section 4.3, last paragraph - See General Comment #1. Delete last sentence.

CDPH EMB will provide comments under a separate cover by no later than October 27, 2017. If you have any questions, please feel free to contact me at (510) 540-2480 or Juanita.bacey@dtsc.ca.gov. Thank you.

Sincerely,

Nina Bacey, Project Manager
Brownfields and Environmental Restoration
California Department of Toxic Substances Control

Enclosure

cc: via email

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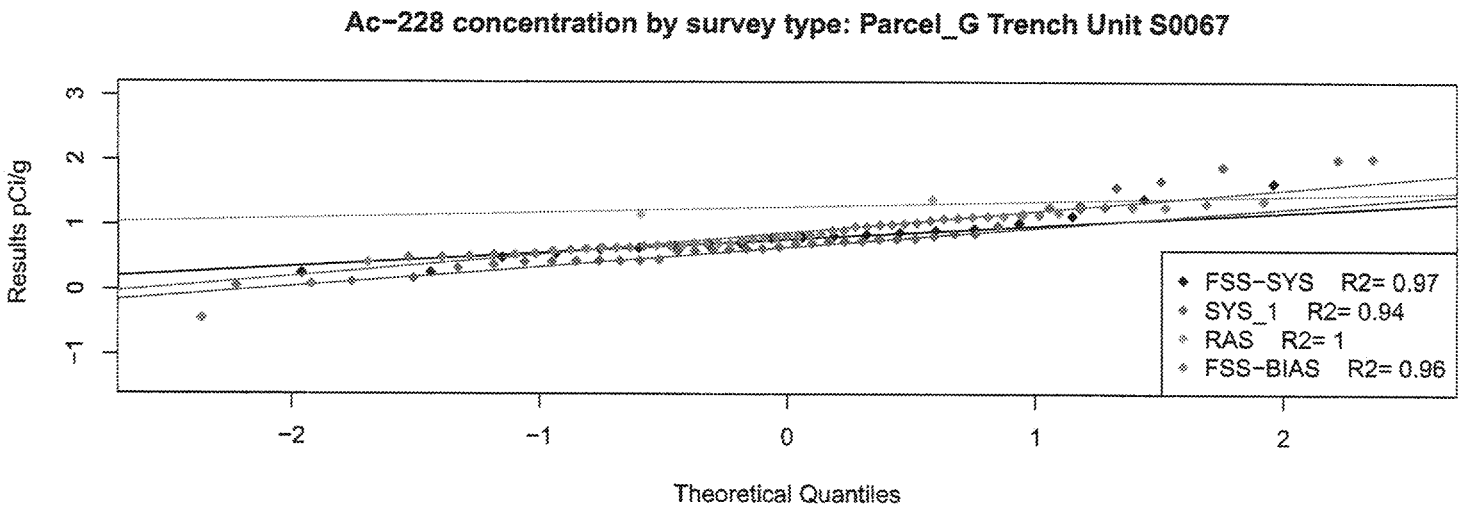
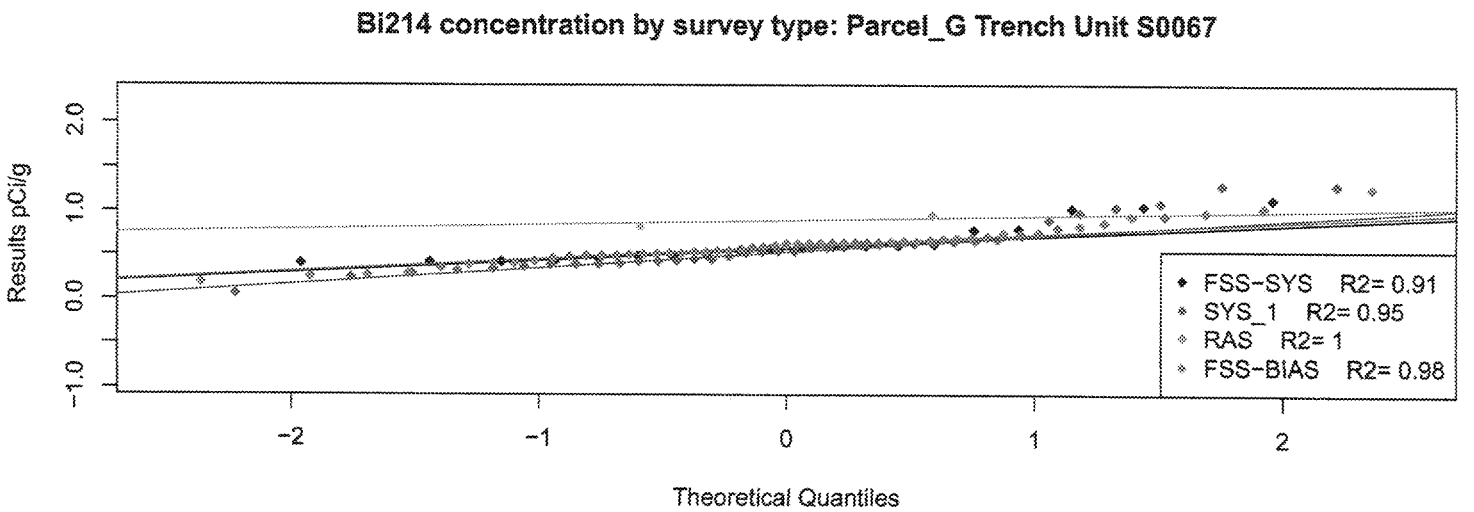
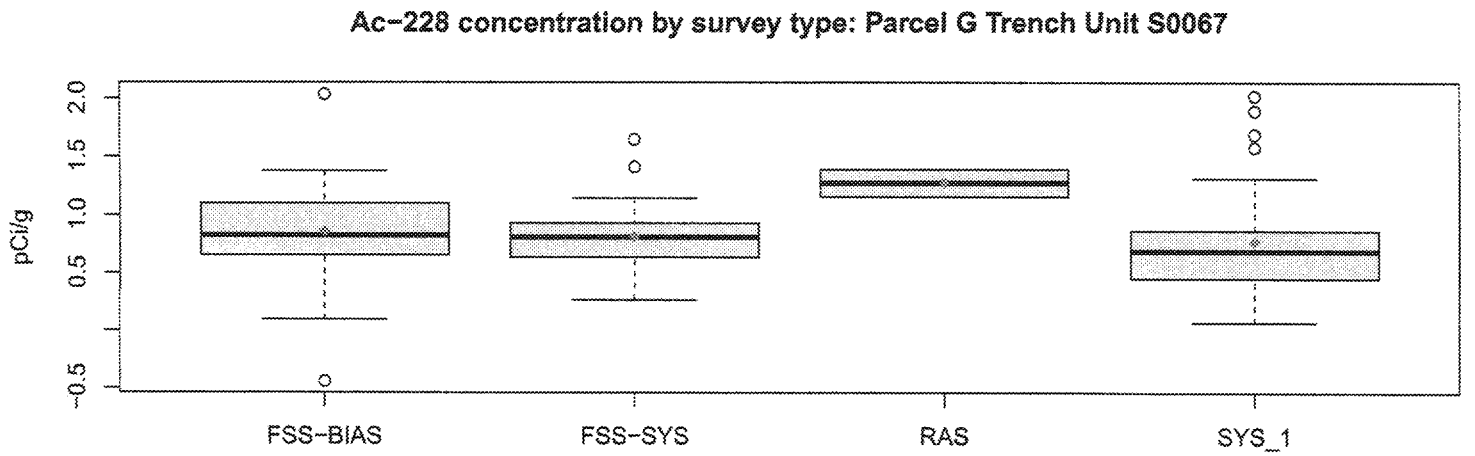

Ac-228 concentration by survey type: Parcel_G Trench Unit S0067
Results pCi/g
3
2
1
0
-1
-2
-1
0
1
2
Theoretical Quantiles
FSS-SYS R2= 0.97
SYS_1 R2= 0.94
RAS R2= 1
FSS-BIAS R2= 0.96


Bi214 concentration by survey type: Parcel_G Trench Unit S0067
Results pCi/g
2.0
1.0
0.0
-1.0
-2
-1
0
1
2
Theoretical Quantiles
FSS-SYS R2= 0.91
SYS_1 R2= 0.95
RAS R2= 1
FSS-BIAS R2= 0.98


Ac-228 concentration by survey type: Parcel G Trench Unit S0067
pCi/g
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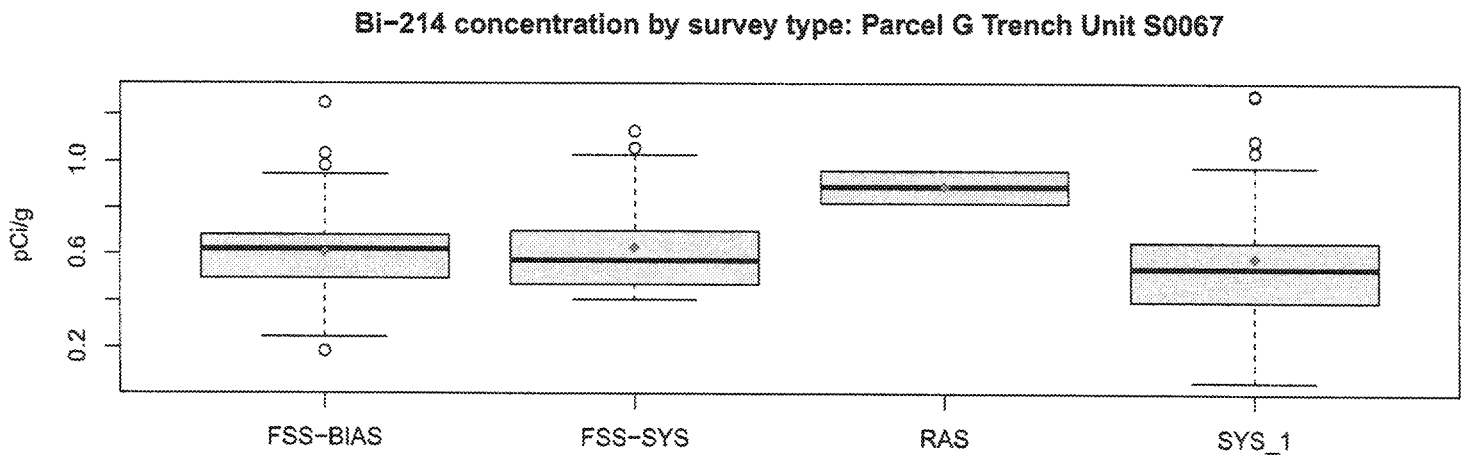
0.5
1.0
1.5
2.0
FSS-BIAS
FSS-SYS
RAS
SYS_1


Bi-214 concentration by survey type: Parcel G Trench Unit S0067
pCi/g
0.2
0.6
1.0
FSS-BIAS
FSS-SYS
RAS
SYS_1